

Claims

[c1] 1. A plastic conveyor belt module comprising:

- a plastic module body extending longitudinally from a first end to a second end and transversely from a first side to a second side and including a top surface;
- a sideguard upstanding from the top surface and forming a wall that extends generally longitudinally from a first edge at the first end of the module body to a second edge at the second end;
- wherein the first edge and the second edge are generally perpendicular to the top surface; and
- wherein the sideguard is unitarily formed with the plastic module body.

[c2] 2. A plastic conveyor belt module as in claim 1 wherein the sideguard is generally rectangular in shape when viewed from the first side of the module body.

[c3] 3. A plastic conveyor belt module as in claim 1 wherein the sideguard includes first and second thinned-out regions at the respective first and second ends of the module body.

- [c4] 4. A plastic conveyor belt module as in claim 3 wherein the first and second thinned-out regions define wedge-shaped recesses at the first and second ends of the module body.
- [c5] 5. A plastic conveyor belt module as in claim 1 wherein the sideguard is thinner at the first and second ends of the module body than at a point midway between the first and second ends.
- [c6] 6. A plastic conveyor belt module as in claim 1 wherein the sideguard is indented inward transversely from the first side of the module body.
- [c7] 7. A plastic conveyor belt module as in claim 1 wherein the sideguard includes a first flat portion and a second flat portion in a partly overlapping relationship.
- [c8] 8. A plastic conveyor belt module as in claim 1 further comprising a flight unitarily formed with the module body and the sideguard and extending upward from the top surface of the module body and perpendicularly from the sideguard toward the second side of the module body.
- [c9] 9. A plastic conveyor belt module as in claim 1 wherein the first edge and the second edge of the sideguard are transversely offset from each other.

[c10] 10. A modular plastic conveyor belt formed of a plurality of plastic conveyor belt modules as in claim 1 linked end to end and side to side in rows with other belt modules devoid of sideguards to form a modular plastic conveyor belt, characterized in that the plastic conveyor belt modules with sideguards are arranged as the outermost belt modules of each row.

[c11] 11. A plastic conveyor belt module comprising:
a plastic module body extending longitudinally from a first end to a second end, transversely from a first side to a second side, and vertically from a top surface to a bottom surface;
first and second sets of hinge eyes arranged along the first and second ends of the plastic module body;
a wall including a base connected to the top surface along a longitudinal junction, the wall extending vertically upward from the top surface and being unitarily formed with the plastic module body,
wherein the wall includes a leading edge extending upward from one of the hinge eyes of the first set at the first end of the module body and a trailing edge extending upward from one of the hinge eyes of the second set at the second end of the module body,
and
wherein the leading edge and the trailing edge of the

wall are transversely offset.

- [c12] 12. A plastic conveyor belt module as in claim 11 wherein the leading edge and the trailing edge extend perpendicularly upward from the top surface of the module body.
- [c13] 13. A plastic conveyor belt module as in claim 11 wherein the wall includes first and second thinned-out regions at the respective first and second ends of the module body.
- [c14] 14. A plastic conveyor belt module as in claim 13 wherein the first and second thinned-out regions define V-shaped recesses in the wall at the first and second ends of the module body wherein one side of the V at the first end is defined by the leading edge of the wall and one side of the V at the second end is defined by the trailing edge of the wall.
- [c15] 15. A modular plastic conveyor belt module having an outer side edge formed by a series of plastic conveyor belt modules as in claim 11 linked end to end by hinge pins received in the interleaved hinge eyes of adjacent belt modules wherein the trailing edge of the wall of a leading module is transversely offset from the leading edge of the wall of a trailing module so that the plates

do not interfere with each other when the conveyor belt modules are arranged consecutively in the modular plastic conveyor belt.

- [c16] 16. A modular plastic conveyor belt as in claim 15 wherein the trailing edge of the wall of a leading module overlaps the leading edge of the wall of a trailing module to form a gapless wall along the conveyor belt.
- [c17] 17. A plastic conveyor belt module comprising:
 - a plastic module body having a top deck and extending longitudinally from a first end to a second end and laterally from a first side to a second side;
 - first and second sets of hinge eyes arranged along the first and second ends of the plastic module body;
 - a wall upstanding from the deck and unitarily formed with the plastic module body,
 - the wall extending longitudinally along the deck from a first edge of the wall at the first end of the plastic module body to a second edge at the second end and laterally between first and second lateral sides of the wall,
 - wherein the first and second edges are generally perpendicular to the deck, and
 - wherein the first lateral side of the wall forms a first wedge-shaped indentation at the first edge and the second lateral side of the wall forms a second

wedge-shaped indentation at the second edge, whereby the first and second edges are laterally offset.

- [c18] 18. A plastic conveyor belt module as in claim 17 further comprising a flight unitarily formed with the module body and the wall and extending upward from the deck and perpendicularly from the wall.
- [c19] 19. A plastic conveyor belt module as in claim 17 wherein the first edge of the wall extends onto a hinge eye of the first set and wherein the second edge of the wall extends onto a hinge eye of the second set.
- [c20] 20. A plastic conveyor belt module as in claim 17 wherein the wedge-shaped indentations widen with distance from the deck.
- [c21] 21. A plastic conveyor belt module as in claim 17 wherein the wall includes a flat top.
- [c22] 22. A modular plastic conveyor belt formed of a plurality of plastic conveyor belt modules as in claim 17 linked end to end and side to side in rows with other belt modules devoid of walls to form a modular plastic conveyor belt, characterized in that the plastic conveyor belt modules with walls are arranged consecutively along the length of the conveyor belt with the walls laterally

aligned to form a continuous longitudinal wall along the length of the conveyor belt.

[c23] 23. A plastic conveyor belt module comprising:

- a plastic module body having a top deck and extending longitudinally from a first end to a second end and laterally from a first side to a second side;
- first and second sets of hinge eyes arranged along the first and second ends of the plastic module body;
- a sideguard upstanding from the deck and unitarily formed with the plastic module body,
- the sideguard including first and second laterally offset plates, each generally in the form of a right trapezoid having a long base, a short base, a slanted edge, and a perpendicular edge generally perpendicular to the deck;
- the first plate being attached along its long base to the deck and extending longitudinally from the first end to the second end of the module body with its perpendicular edge at the first end;
- the second plate being attached along its long base to the deck and extending longitudinally from the first end to the second end of the module body with its perpendicular edge at the second end;
- wherein the first and second plates are joined to each other along imaginary portions of confronting lateral

faces.

- [c24] 24. A plastic conveyor belt module as in claim 23 further comprising a flight unitarily formed with the module body and the sideguard and extending upward from the deck and perpendicularly from the sideguard.
- [c25] 25. A plastic conveyor belt module as in claim 23 wherein the perpendicular edge of the first plate extends onto a hinge eye of the first set and wherein the perpendicular edge of the second plate extends onto a hinge eye of the second set.
- [c26] 26. A plastic conveyor belt module as in claim 23 wherein the sideguard includes a flat top.
- [c27] 27. A modular plastic conveyor belt formed of a plurality of plastic conveyor belt modules as in claim 23 linked end to end and side to side in rows with other belt modules devoid of sideguards to form a modular plastic conveyor belt, characterized in that the plastic conveyor belt modules with sideguards are arranged consecutively along the length of the conveyor belt with the sideguards laterally aligned to form a continuous longitudinal wall along the length of the conveyor belt.
- [c28] 28. A plastic conveyor belt module comprising:
 - a plastic module body having a top deck and extend-

ing longitudinally from a first end to a second end and laterally from a first side to a second side; first and second sets of hinge eyes arranged along the first and second ends of the plastic module body; a sideguard upstanding from the deck and unitarily formed with the plastic module body, the sideguard including a trapezoidal prism terminating laterally in first and second opposite parallel faces defining therebetween a central thickness of the sideguard, the trapezoidal prism further characterized by a base extending longitudinally along the deck from the first end to the second end of the module body and by first and second edges extending upward from the ends of the base and converging toward each other; the sideguard further including first and second extensions, wherein the first extension is flush with the first face and extends longitudinally from the first edge of the triangular prism toward the first end of the module body, and wherein the second extension is flush with the second face and extends longitudinally from the second edge of the triangular prism toward the second end of the module body, and wherein the thicknesses of the first and second ex-

tensions are less than the central thickness of the sideguard.

- [c29] 29. A plastic conveyor belt module as in claim 28 further comprising a flight unitarily formed with the module body and the sideguard and extending upward from the deck and perpendicularly from the sideguard.
- [c30] 30. A plastic conveyor belt module as in claim 28 wherein the first extension of the sideguard extends onto a hinge eye of the first set and wherein the second extension of the sideguard extends onto a hinge eye of the second set.
- [c31] 31. A modular plastic conveyor belt formed of a plurality of plastic conveyor belt modules as in claim 28 linked end to end and side to side in rows with other belt modules devoid of sideguards to form a modular plastic conveyor belt, characterized in that the plastic conveyor belt modules with sideguards are arranged consecutively along the length of the conveyor belt with the sideguards laterally aligned to form a continuous longitudinal wall along the length of the conveyor belt.
- [c32] 32. A plastic conveyor belt module comprising:
 - a plastic module body having a top deck and extending longitudinally from a first end to a second end

and laterally from a first side to a second side; first and second sets of hinge eyes arranged along the first and second ends of the plastic module body; a sideguard upstanding from the deck and unitarily formed with the plastic module body, the sideguard including:

a first portion extending longitudinally along the deck from the first end of the module body, a second portion offset laterally from the first portion and extending longitudinally along the deck from the second end of the module body, and a connecting portion disposed between the first and second ends of the module body and extending laterally from the first portion to the second portion, wherein the longitudinal extent of the connecting portion decreases with distance above the deck.

- [c33] 33. A plastic conveyor belt module as in claim 32 further comprising a flight unitarily formed with the module body and the sideguard and extending upward from the deck and perpendicularly from the sideguard.
- [c34] 34. A plastic conveyor belt module as in claim 32 wherein the first portion of the sideguard extends onto a

hinge eye of the first set and wherein the second portion of the sideguard extends onto a hinge eye of the second set.

- [c35] 35. A plastic conveyor belt module as in claim 32 wherein the wall includes a flat top.
- [c36] 36. A modular plastic conveyor belt formed of a plurality of plastic conveyor belt modules as in claim 32 linked end to end and side to side in rows with other belt modules devoid of sideguards to form a modular plastic conveyor belt, characterized in that the plastic conveyor belt modules with sideguards are arranged consecutively along the length of the conveyor belt with the sideguards laterally aligned to form a continuous longitudinal wall along the length of the conveyor belt.